Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 1 of 32

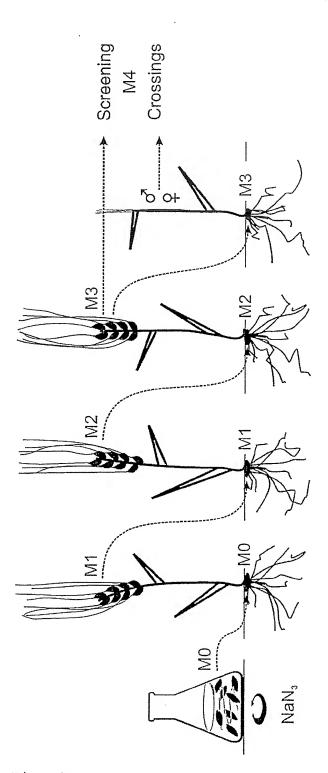


Fig. 1A

Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

Attorney Name: Denise M. Kettelberger

Phone No.: 612.371.5268

Sheet 2 of 32

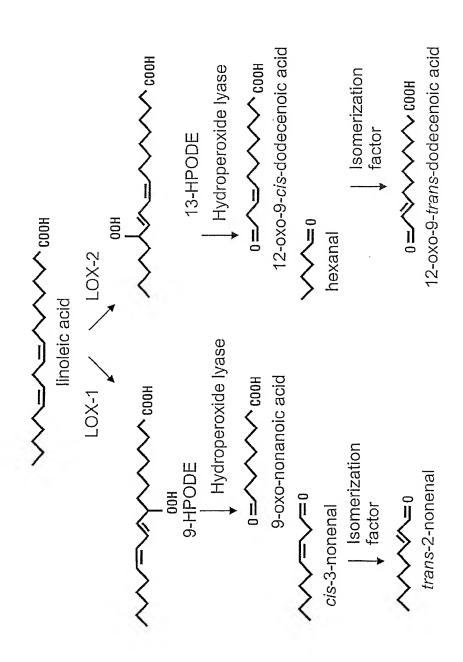
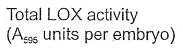


Fig. 1B

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268

Sheet 3 of 32

Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE Attorney Name: Denise M. Kettelberger Phone No.: 612.371.5268
Sheet 4 of 32



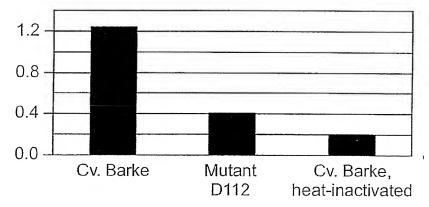
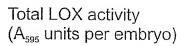


Fig. 2

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 5 of 32



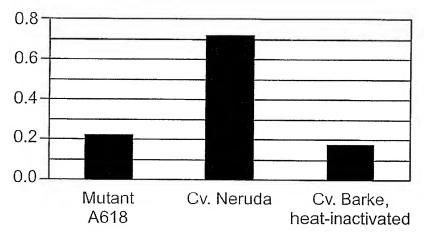


Fig. 3

Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

Attorney Name: Denise M. Kettelberger Phone No.: 612.371.5268 Sheet 6 of 32

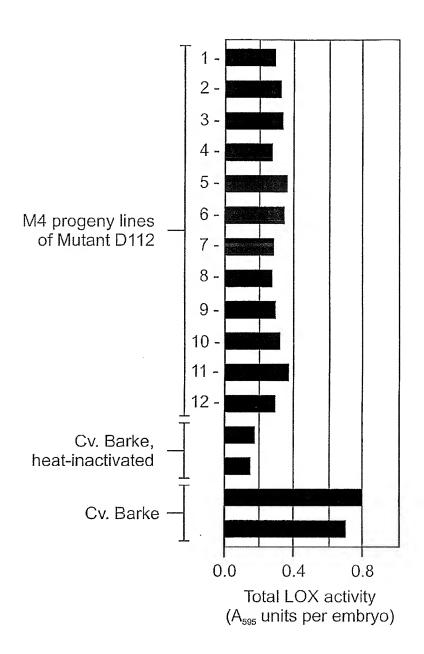


Fig. 4

PCT/DK2005/000160

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

Attorney Name: Denise M. Kettelberger Phone No.: 612.371.5268

Sheet 7 of 32

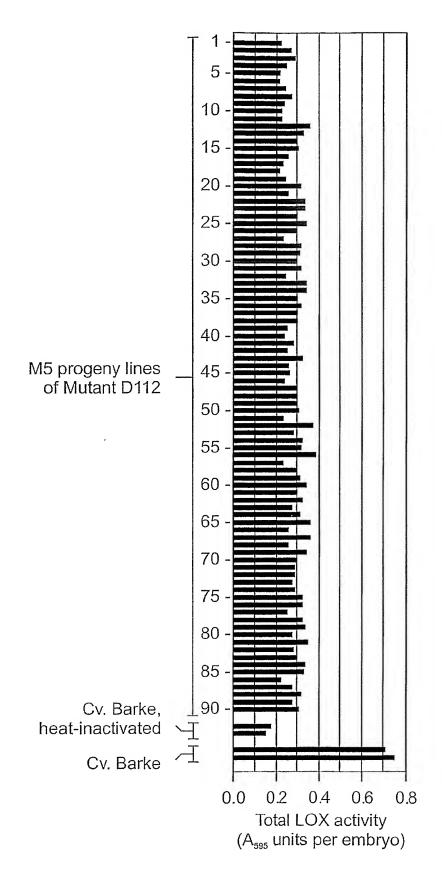


Fig. 5

Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

Attorney Name: Denise M. Kettelberger Phone No.: 612,371,5268 Sheet 8 of 32

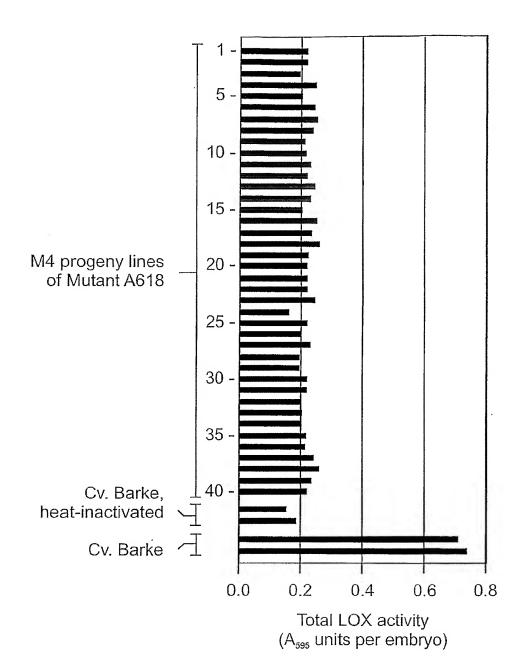


Fig. 6

Inventor: BREDDAM et al. PCT/DK2005/000160 Docket No.: 12845.0009USWO

3/32

Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

Attorney Name: Denise M. Kettelberger Phone No.: 612.371.5268

Sheet 9 of 32

6 LOX-1-

10 11 12 13 14 15 16 LOX-1 ---

Fig. 7

Inventor: BREDDAM et al. Docket No.: 12845.0009USWO

Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE Attorney Name: Denise M. Kettelberger Phone No.: 612.371.5268

Sheet 10 of 32



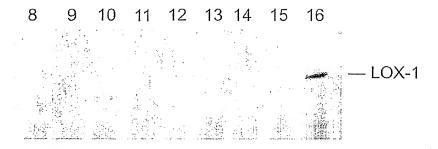


Fig. 8

DOCKET NO.: 12843.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

Attorney Name: Denise M. Kettelberger

Phone No.: 612.371.5268

Sheet 11 of 32

./32

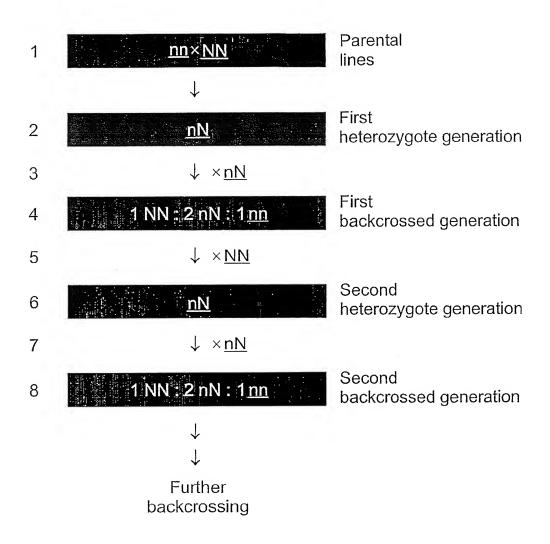


Fig. 9

Inventor: BREDDAM et al. Docket No.: 12845.0009USWO

Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

Attorney Name: Denise M. Kettelberger

Phone No.: 612.371.5268

Sheet 12 of 32

.2/32

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 13 of 32



PCT/DK2005/000160

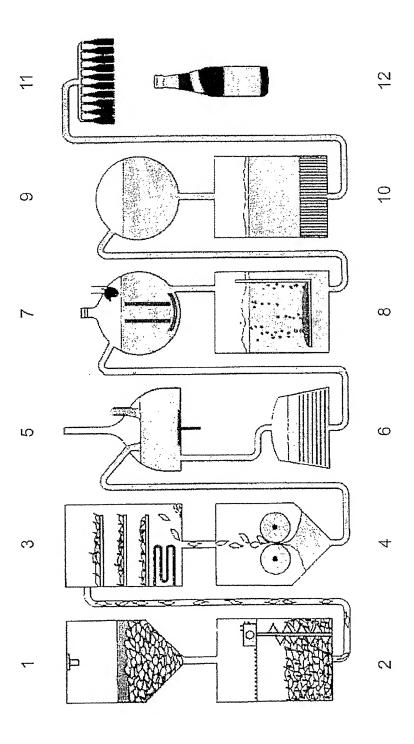
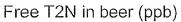


Fig. 11

Inventor: BREDDAM et al.
Docket No.: PENDING00074615
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

Attorney Name: Denise M. Kettelberger Phone No.: 612.371.5268

Sheet 14 of 32



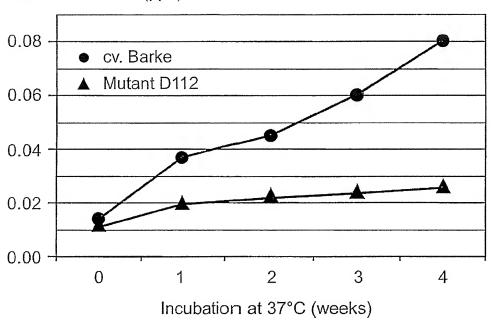


Fig. 12A

Attorney Name: Denise M. Kettelberger Phone No.: 612.371.5268

Sheet 15 of 32

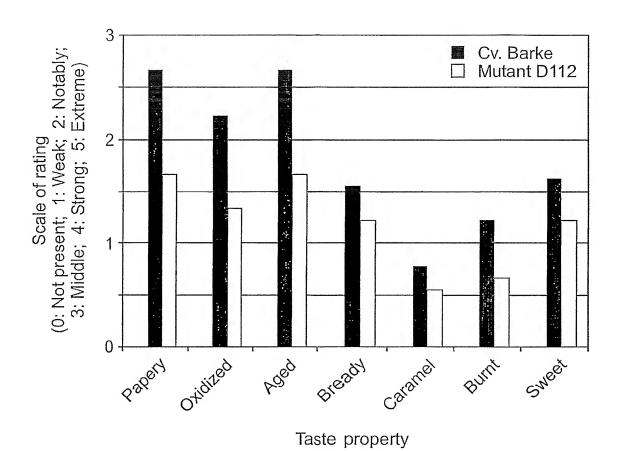


Fig. 12B

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 16 of 32

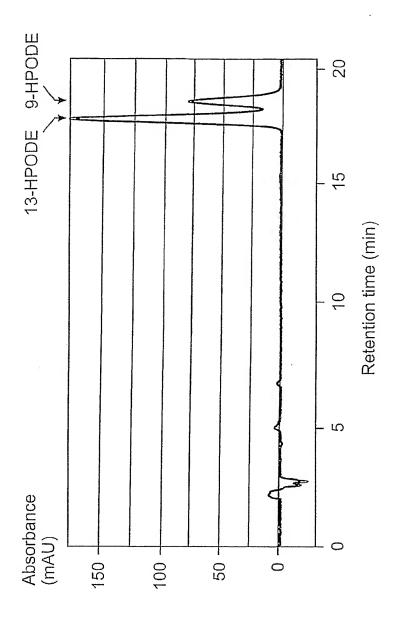


Fig. 13A

.7/32

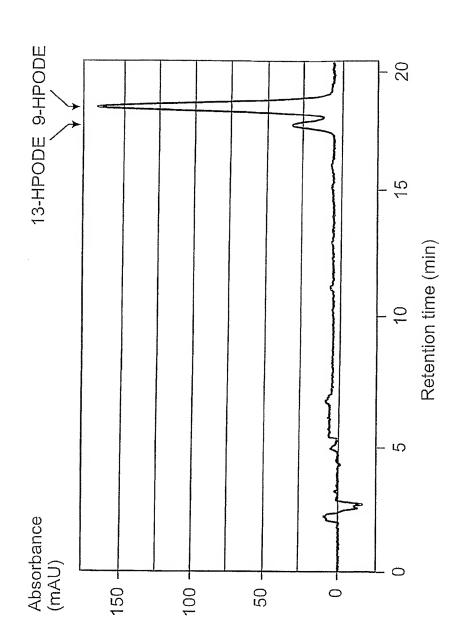


Fig. 13B

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 18 of 32

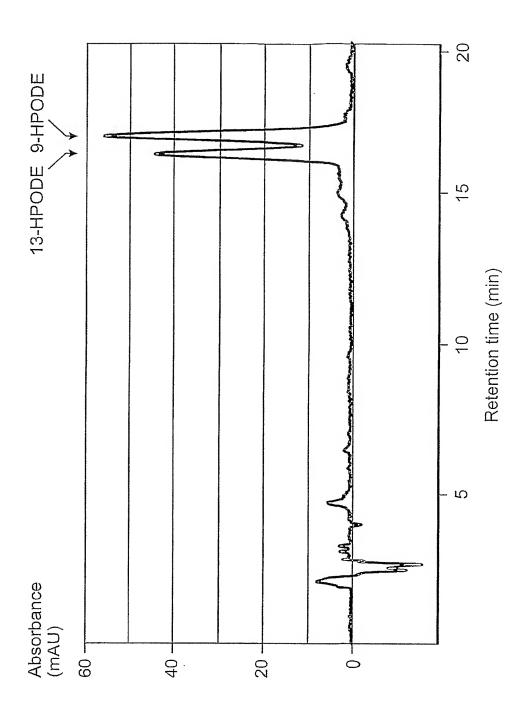


Fig. 13C

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 19 of 32

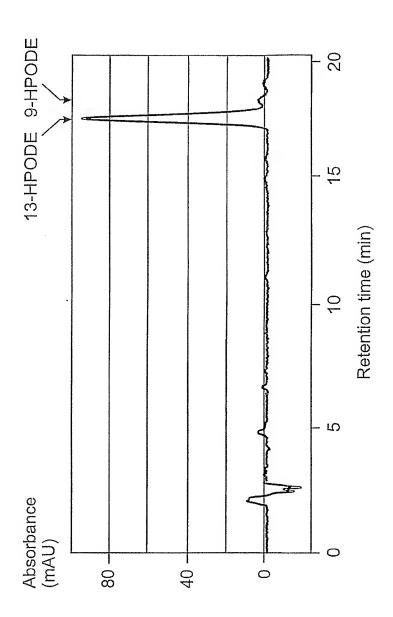


Fig. 13D

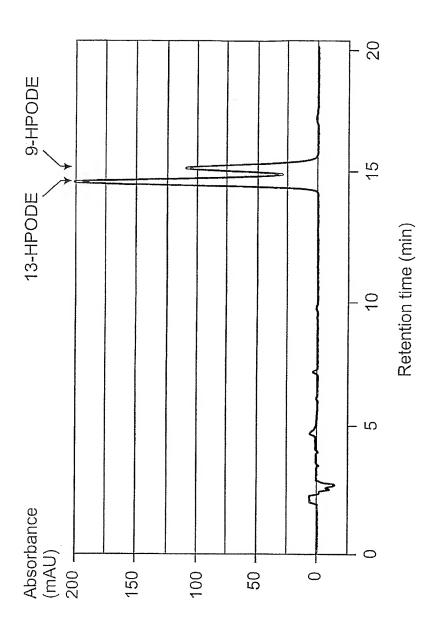


Fig. 14A

'32

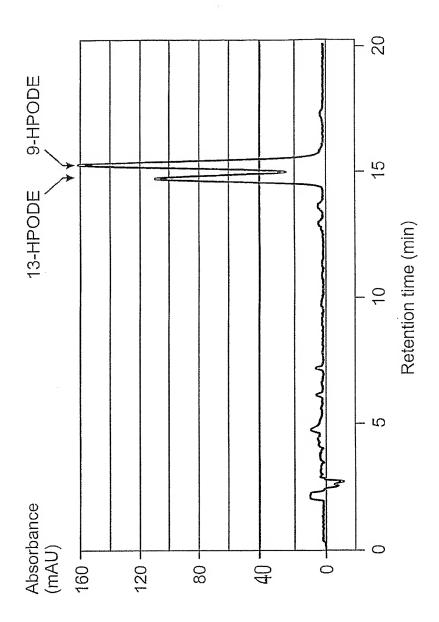


Fig. 14B

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 22 of 32

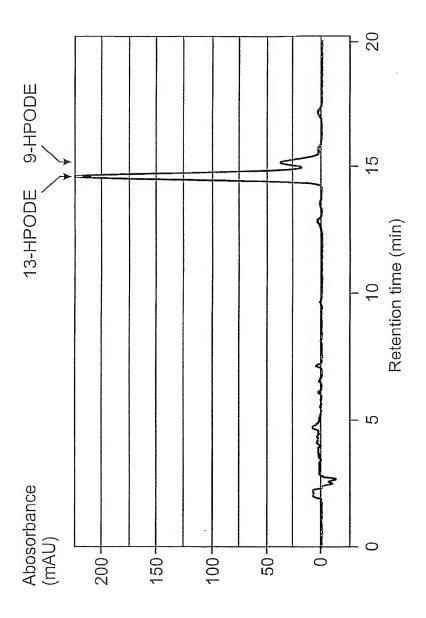


Fig. 14C

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 23 of 32

^{'32}

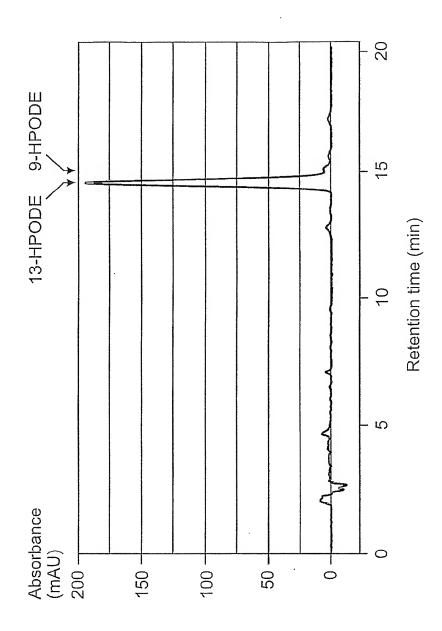


Fig. 14D

Attorney Name: Denise M. Kettelberger

Phone No.: 612.371.5268 Sheet 24 of 32

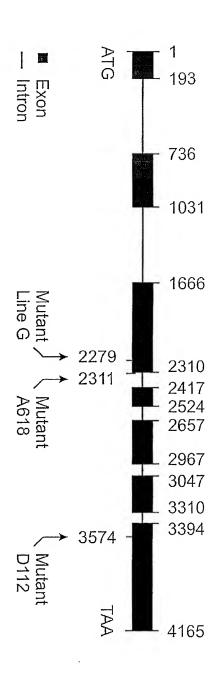


Fig. 15

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 25 of 32

		Gene		Protein	_
	Change	Position in genomic DNA	Result	Length in amino acids	Mass in kDa
Wild-type				862	96.4
Mutant A618	G→A	2311	RNA splicing error; translational stop	388	44.5
Mutant D112	G→A	3574	Translational stop	665	74.2

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

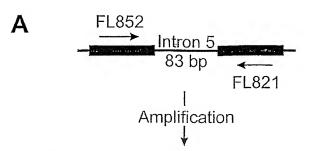
Attorney Name: Denise M. Kettelberger

Phone No.: 612.371.5268

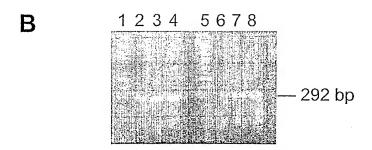
Sheet 26 of 32

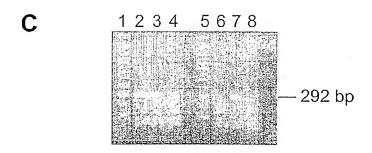
!6/32

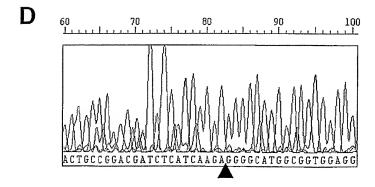
PCT/DK2005/000160



DNA template: 375-bp PCR product RNA template: 292-bp PCR product







Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 27 of 32

Ż7/32

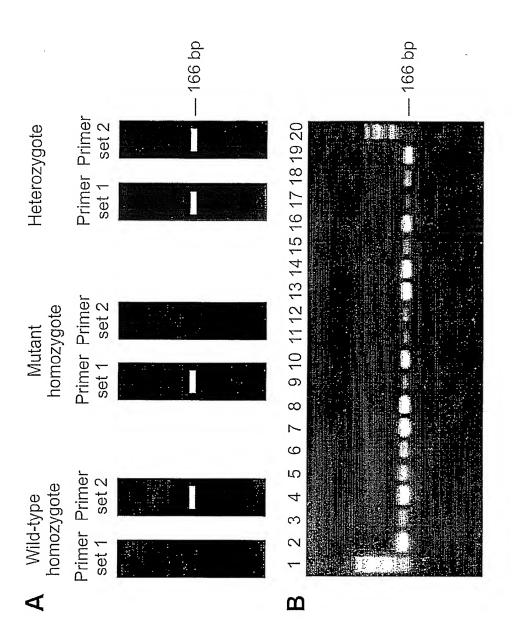
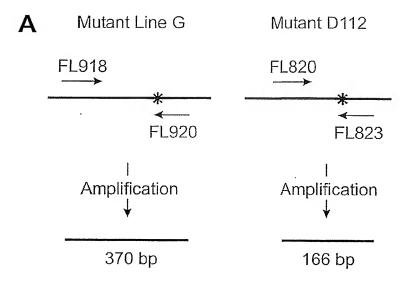


Fig. 18

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 28 of 32



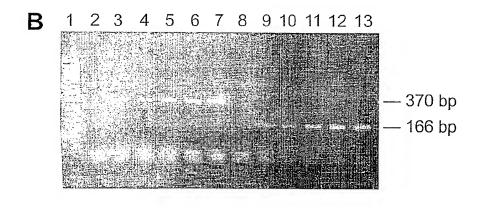


Fig. 19

PCT/DK2005/000160

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 29 of 32

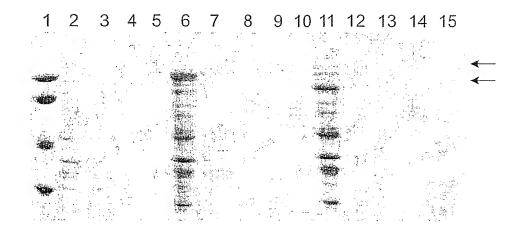
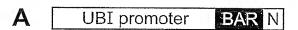


Fig. 20

PCT/DK2005/000160

Inventor: BREDDAM et al.
Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE
Attorney Name: Denise M. Kettelberger
Phone No.: 612.371.5268
Sheet 30 of 32

30/32





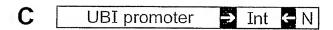


Fig. 21

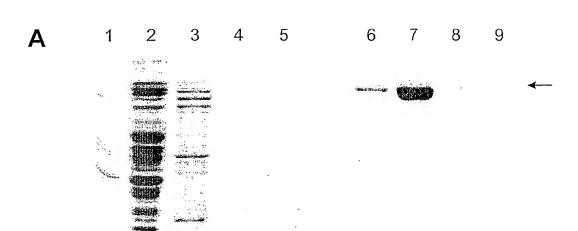
Inventor: BREDDAM et al. Docket No.: 12845.0009USWO

Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE Attorney Name: Denise M. Kettelberger Phone No.: 612.371.5268

Sheet 31 of 32

/32

PCT/DK2005/000160



Relative LOX-1 activity (%) B

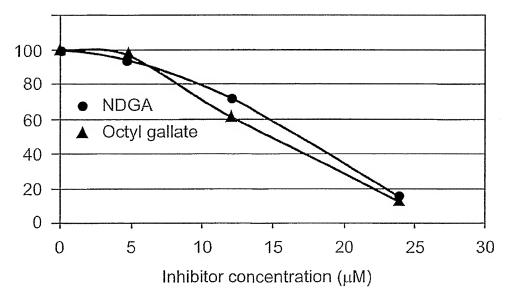


Fig. 22

Docket No.: 12845.0009USWO
Title: BARLEY FOR PRODUCTION OF FLAVOR-STABLE BEVERAGE

Attorney Name: Denise M. Kettelberger Phone No.: 612.371.5268 Sheet 32 of 32

2/32

Free T2N in wort (ppb)

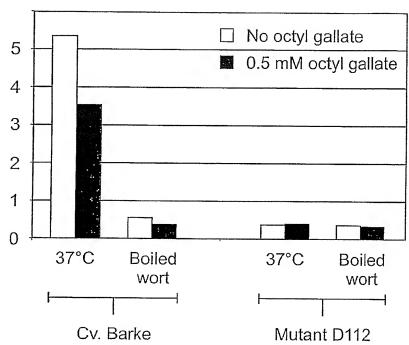


Fig. 23